



*DRAFT Technical Report*

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## **SWAMP Labor Day 2008 Recreational Use Study**

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# SWAMP Labor Day 2008 Recreational Use Study

***DRAFT March 2009***

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## 1.0 EXECUTIVE SUMMARY

On August 27, August 31, and September 3, 2008, staff from the Central Valley Regional Water Quality Control Board (Central Valley Water Board) conducted a region-wide water quality study of local swimming holes during a period of anticipated elevated recreation use, e.g. over a holiday weekend. The study consisted of sampling before, during, and after the 2008 Labor Day weekend, for general water quality parameters (specific conductivity, pH, and temperature) as well as *E. coli* as a pathogen indicator.

Twenty-one stakeholder groups throughout the Central Valley Region participated in the site selection process. Staff provided training, supplies and sample transportation to five stakeholder groups assisting with sample collection. Seven field crews from Central Valley Water Board were required for each sample collection date and all *E. coli* sample analyses were conducted at Central Valley Water Board's in-house laboratories.

Results show that 52 out of a total of 57 sites did not exceed the EPA's recommended full contact recreation limit for *E. coli* (235 MPN/100mL) on any of the three collection dates. Of the five sites with elevated levels, four sites in the Sacramento River Basin exceeded the EPA's recommended limit for *E. coli* on one or more of the collection dates. An additional site in the Sacramento River Basin had a duplicate Quality Assurance field sample exceed the EPA guideline. Four of these five sites exhibited the highest *E. coli* concentrations on the first day of the study, before the Labor Day weekend. Elevated *E. coli* concentrations prior to the highest level of human use indicate that factors other than human recreation likely dominate *E. coli* concentrations. Flow data and field measurements of temperature, specific conductivity (EC), and pH were variable between the 5 sites and it is unclear if these constituents had an effect on the *E. coli* concentrations.

Based on information collected during this project, future-monitoring efforts in the Central Valley Region should consider:

- Pathogen identification studies to help characterize *E. coli* sources.
- *E. coli* O157:H7 analysis to determine if the pathogenic *E. coli* is present.
- Follow-up *E. coli* sampling at other times of the year to develop a more thorough analysis of water quality.

Summary data sheets are in Appendix 1 and also posted at:

[http://www.waterboards.ca.gov/centralvalley/water\\_issues/water\\_quality\\_studies/surface\\_water\\_ambient\\_monitoring/swamp\\_recreational\\_use\\_2008/index.shtml](http://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_studies/surface_water_ambient_monitoring/swamp_recreational_use_2008/index.shtml)